



# BOARD OF COMMISSIONERS

1 S. Main St., 9th Floor  
Mount Clemens, Michigan 48043  
586-469-5125 FAX 586-469-5993  
[macombcountymi.gov/boardofcommissioners](http://macombcountymi.gov/boardofcommissioners)

## AD HOC COMMITTEE ON COUNTYWIDE ENERGY CONSERVATION

MONDAY, NOVEMBER 17, 2008

### AGENDA

1. Call to Order
2. Pledge of Allegiance
3. Adoption of Agenda
4. Approval of Minutes dated April 16, 2008 (previously distributed)
5. Public Participation
6. Presentation by Dillon Energy Services Re: Preliminary Study of County and Administration Buildings and Jail (mailed)
7. Presentation by LPB Energy Management Re: Energy Conservation (mailed)
8. Installation of Ozone Laundry Generation System at Jail Annex (mailed)
9. Information Re: Energy Savings and Resource Sharing (mailed)
10. New Business
11. Public Participation
12. Adjournment

**MEMBERS:** DiMaria-Chair, Bruley, DeSaele and Crouchman (ex-officio)

### MACOMB COUNTY BOARD OF COMMISSIONERS

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Leonard Haggerty  
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Paul Gielegem - District 19  
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Betty Slinde - District 22  
Sarah Roberts - District 24  
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Leon Drolet - District 26

RESOLUTION NO. \_\_\_\_\_

FULL BOARD MEETING DATE: \_\_\_\_\_

AGENDA ITEM: \_\_\_\_\_

MACOMB COUNTY, MICHIGAN

RESOLUTION TO: Presentation of Preliminary Study of the County Building, Jail and Administration  
Building by Dillon Energy Services.

INTRODUCED BY: Commissioner Phillip A. DiMaria, Chair  
Energy Conservation Committee

COMMITTEE/MEETING DATE

Meeting Date: 11/17/08  
\_\_\_\_\_  
\_\_\_\_\_

# DILLON ENERGY

## S E R V I C E S

November 17, 2008

Philip DiMaria  
Macomb County Board of Commissioners  
1 S. Main St.  
Mount Clemens, MI 48043

Dear Phil,

We have completed our preliminary study of the Macomb County Building, the Macomb County Jail, and the Admin Building. We believe the Macomb County Building and the Macomb County Jail present the strongest opportunity for savings right now.

### **Macomb County Building**

#### **1. Lighting.**

We surveyed the 9<sup>th</sup> Floor and found that the vast majority of the fixtures were 2x4 4-Lamp T12 Recessed Troffers, each fixture running on two magnetic ballasts. As magnetic ballasts and T12 lamps are energy-inefficient, they are being phased out of production. Magnetic ballasts will no longer be sold after summer 2010, so a retrofit is necessary. The typical retrofit for these fixtures is a 2-Lamp T8 Retrofit Kit with an electronic ballast and a reflector, which offers about 66% wattage reduction, and is free of the buzzing and flickering magnetic ballasts often produce.

We were told by staff in the building that maintenance has disconnected one of the two ballasts in some of the fixtures, leaving them running two T12 lamps on a single magnetic ballast. If this is the case, the County is already gaining much of the savings available. A retrofit will ultimately be necessary, since any magnetic ballasts that burn out after summer 2010 will have to be replaced with electronic ballasts anyway, but unfortunately if ballasts have already been disconnected, the retrofit will not pay back within the quick time frame we normally see.

At electric rate and hours of operation provided, we have made the following savings estimates for the 9<sup>th</sup> floor alone.

If no ballasts in the 2x4 fixtures have been disconnected:

Wattage reduction: 18,462 W (63.6%)

Year 1 estimated electric savings \$2237  
Estimated Materials cost: \$4998  
Payback: 26 months

If one ballast in each of the 2x4 fixtures has been disconnected:

Wattage reduction: 4890 W (31.6%)  
Year 1 estimated electric savings: \$605  
Estimated Materials cost: \$4998  
Payback: 96 months

If the 9<sup>th</sup> floor is representative of the other floors in the building, the savings opportunity on the other floors should be similar. (Please note that these are simply estimates based on the manufacturers' ratings of energy use by these products. The actual savings could be slightly higher or lower, based on changes in hours of operation, electric rate, or usage patterns, or other variables.):

Our recommendation is to first determine the number of fixtures in which one of the magnetic ballasts has been disconnected. If that number is well under half, a full retrofit will likely be cost-effective. But if the number is half of the fixtures or more, a full retrofit will likely yield too long a payback, and we would recommend that the County simply buy a smaller supply of T8 retrofit kits, to be installed as the old magnetic ballasts fail.

## 2. Water

There is also an opportunity to save on water costs by installing water savings devices in faucets, toilets, and urinals. Many bathroom faucets use 2.2 gallons per minute. By installing 1.0 GPM faucet aerators, we can reduce water use in those faucets by 57%. By installing a Conservacap and valve kit we can reduce the water use of many toilets from 3.5 gallons per minute to 2.75 (27% savings) and many urinals from 3.0 GPM to 2.5 (17% savings). There will be additional energy savings from installing faucet aerators due to the reduction of hot water use.

Water conservation devices are a very inexpensive, cost-effective way to reduce utility costs.

## Macomb County Jail

We surveyed the gym and two connected floors of the tower. We were told that maintenance is in the process of retrofitting and rewiring 100W metal halide fixtures throughout the tower to install compact fluorescents, though we do not know how many have been done to date. We have included in our estimate the savings available by retrofitting all of these 100W metal halides with 32W compact fluorescents—any that have been completed already would slightly reduce our estimates for both savings and materials cost.

Gym (Replacement of 400W metal halides with our Alumalight T5 4L fluorescent fixture with galvanized steel housing, wire guard, 120/277V ballast, and 8' whip without plug.)

Wattage Reduction: 1792 (48.9%)

Year 1 estimated electric savings: \$1497

Estimated Materials cost: \$2539

Payback: 20 months

Tower

Wattage Reduction: 85,080 (43.9%)

Year 1 estimated electric savings: \$23,083

Estimated Materials cost: \$43,588

Payback: 22 months

There are further opportunities to save through an upgrade of the lighting in the office areas as well, which we can compute at a later date.

### **Macomb Admin Building**

There is a small opportunity in this building to save on water usage by installing faucet aerators for restroom sinks. The lighting system in this building is current enough that while small savings opportunities exist, they won't be particularly cost-effective.

Overall, we recommend leaving lights as is for now. A year or two down the road, as LED technology becomes more cost-friendly, there may be opportunities to revisit this.

Again, these are just estimates based on our preliminary survey. We would be happy to provide detailed proposals for these enhancements and to explore other savings opportunities in Macomb County buildings. For example, we noticed that the metal halides in the executive parking garage can be retrofitted with vaportight T5 fluorescent fixtures, with significant savings. There are surely similar opportunities elsewhere in Macomb County buildings.

Sincerely,

Gary Dillon

# **RECYCLABLE PAPER**

RESOLUTION NO. \_\_\_\_\_

FULL BOARD MEETING DATE: \_\_\_\_\_

AGENDA ITEM: \_\_\_\_\_

**MACOMB COUNTY, MICHIGAN**

RESOLUTION TO: Presentation by LPB Energy Management: Utility Billing Auditing, Bill Processing &  
Payment Support, Online Demand Management Software and Energy Conservation Services.

INTRODUCED BY: Commissioner Phillip A. DiMaria, Chair  
Energy Conservation Committee

**COMMITTEE/MEETING DATE**

Meeting Date: 11/17/08  
\_\_\_\_\_  
\_\_\_\_\_



# FACILITIES & OPERATIONS DEPARTMENT

10 N. Main St., 13th Floor  
Mount Clemens, Michigan 48043  
586-469-5244 FAX 586-469-7770

Lynn M. Arnott-Bryks  
Director

Diane G. Connell  
Operations Supervisor

Larry K. Oakes  
Mechanical Systems Supervisor

TO: Commissioner Phillip A. DiMaria, Chairman  
Energy Conservation Committee

SUBJECT: Energy Conservation  
LPB Energy Management

DATE: June 18, 2008

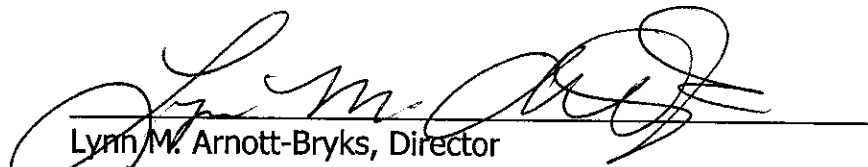
LPB Energy Management approached Dave Diegel relative to the potential for savings through utility bill auditing, utility data management, energy procurement, etc.

Dave and I met with a representative from LPB and thought this would be something the Energy Conservation Committee would be interested in reviewing.

Representatives from LPB Energy Management would like to make a presentation to your Committee.

Attached herewith is a copy of the information they provided.

Respectfully,



Lynn M. Arnott-Bryks, Director  
Facilities & Operations Department

Attachments

LMAB:jsd

cc: Dave Diegel

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*Redefining utility management.*

**EPB Energy Management**

972.383.5200 EXT 225 PHONE

214.693.6366 CELL PHONE

877.946.9463 TOLL FREE

972.383.8200 FAX

jim.rosenthal@lpbenergy.com EMAIL

**Jim Rosenthal**  
*Executive Vice President*

12700 Park Central Drive Suite 200 Dallas, TX 75251

[www.lpbenergy.com](http://www.lpbenergy.com)

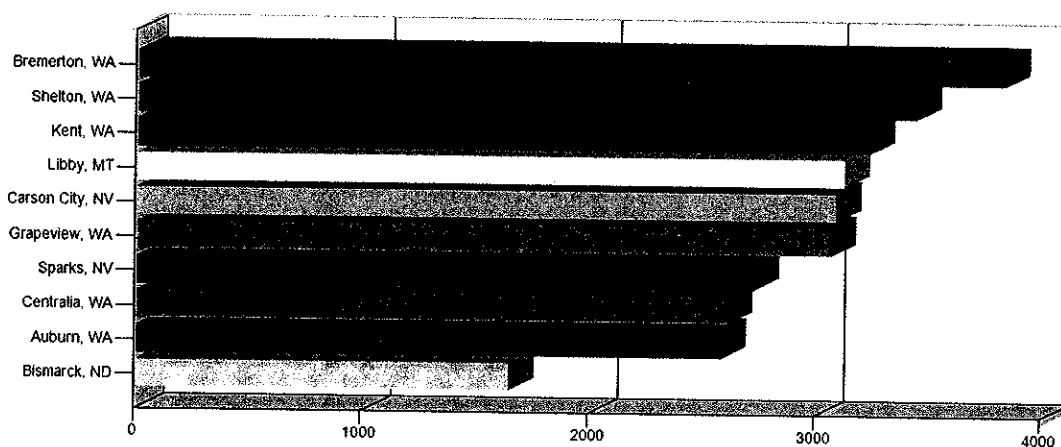
## UTILITY DATA MANAGEMENT

### It all starts with data.

You need detailed data and thorough analysis of utility costs and usage in order to make informed decisions in an increasingly complex utility environment. We at LPB Energy Management have years of experience helping clients figure out the best way to retrieve, organize, analyze, and report utility usage and cost information. The options are as individual as our clients. We work with your IT personnel because they understand how data flows in your organization.

Because LPB offers a comprehensive approach to energy management, we focus on meeting your needs for data delivery, and process integration; we don't have a vested interest in steering you away from processes that have proven effective for your company. The important thing is to collect your data in a manner that facilitates reporting and analysis using proven software, and seizing the savings opportunities that come from robust, reliable, energy information.

**Highest Total Energy Use (MBtu)**



Good data + Utility Manager™ Software = Great Utility Management.

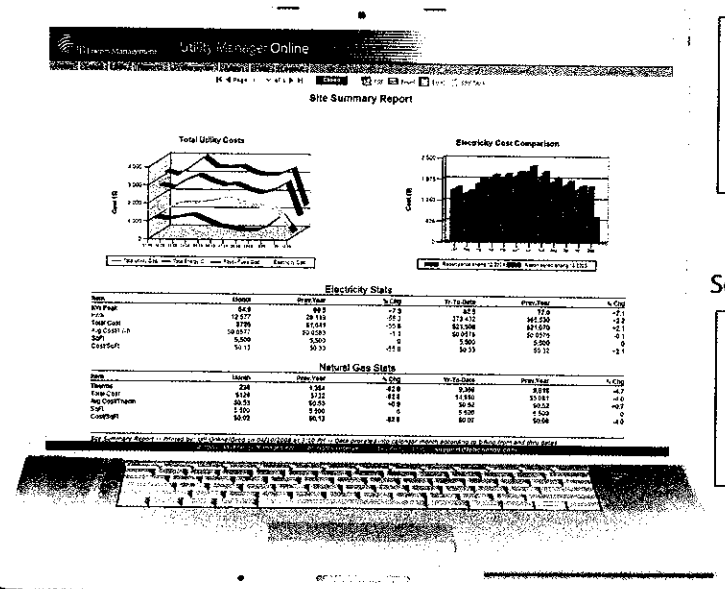
## SOFTWARE ANALYSIS & REPORTING

Once your data is accurately collected and entered into your Utility Manager™ database, you and LPB Energy Management can start analyzing it to identify savings opportunities. **Utility Manager™ can generate hundreds and even thousands** (depending on the number of facilities you have) **of different reports on energy and utility usage.** You can track electricity, natural gas, propane, water, sewer, trash, recycling... just about anything you want to track. LPB has a team of experts available to demonstrate the software on-line, live, so you can see not only the reports, but experience the facility and speed of Utility Manager™.

The following is a sample of some of the most useful Utility Manager™ reports:

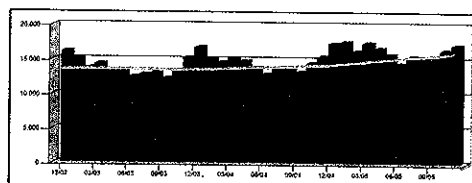
### Executive Level Summary

Usage and cost overview, central to managing utilities.



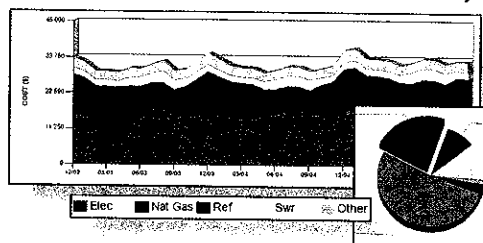
### Benchmarking

Detailed facility comparisons



### Consumption Comparison

See your cost per square ft. for each facility.



### Accurate Data

LPB enters your data accurately and identifies missing bills, incorrect charges and usage inconsistencies.

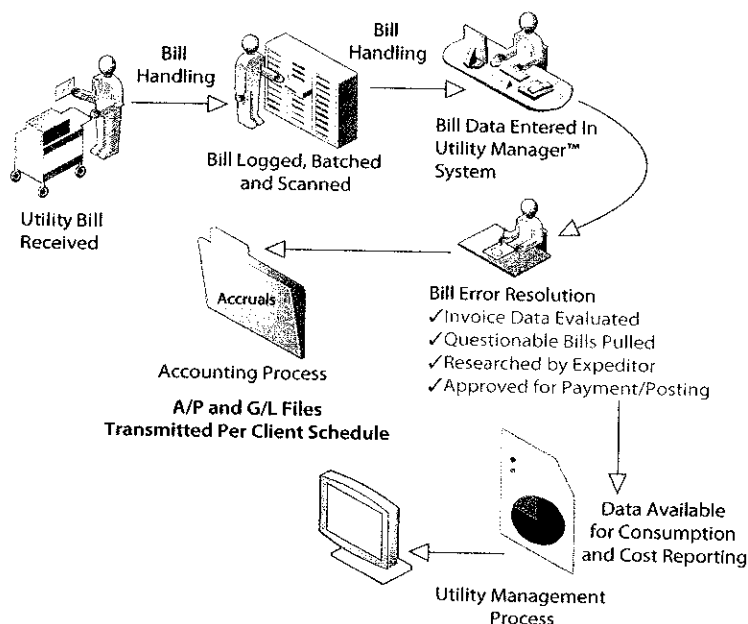
Date/Amount	Service	From	Thru	Usage	Cost	Unit Cost	Entered
Bill date: 12/06/2005 Due date: 12/06/2005 Amount: \$894.54	NG Natural gas (Therms)	11/03/2005	12/06/2005	1,300.5 Therms	694.54	0.534 / Therm	05/18/2005 Batch: 096 (Ad) Voucher #: 0099009900
Bill date: 11/03/2005 Due date: 11/03/2005 Amount: \$317.15	NG Natural gas (Therms)	10/03/2005	11/03/2005	591.5 Therms	317.15	0.536 / Therm	05/18/2005 Batch: 096 (Ad) Voucher #: 0099009900
Bill date: 10/05/2005 Due date: 10/05/2005 Amount: \$227.07	NG Natural gas (Therms)	09/06/2005	10/05/2005	422.0 Therms	227.07	0.538 / Therm	05/18/2005 Batch: 096 (Ad) Voucher #: 0099009900
Bill date: 09/06/2005 Due date: 09/06/2005 Amount: \$238.89	NG Natural gas (Therms)	08/04/2005	09/06/2005	444.2 Therms	238.89	0.537 / Therm	05/18/2005 Batch: 096 (Ad) Voucher #: 0099009900
Bill date: 08/04/2005 Due date: 08/04/2005 Amount: \$336.71	NG Natural gas (Therms)	07/06/2005	08/04/2005	627.3 Therms	336.71	0.537 / Therm	05/18/2005 Batch: 096 (Ad) Voucher #: 0099009900
				838.6 Therms	444.87	0.535 / Therm	05/18/2005 Batch: 096 (Ad) Voucher #: 0099009900
				821.6 Therms	419.97	0.511 / Therm	05/18/2005 Batch: 096 (Ad) Voucher #: 0099009900

*A picture may be worth a thousand words,  
but a live online demo is even better.  
Call your LPB Energy Management  
representative today to see for yourself.*

## BILL PROCESSING AND PAYMENT SUPPORT

Should you elect to outsource the entry of your data, LPB Energy Management has a team of utility experts at your service.

LPB processes and pays utility bills for organizations with multiple sites that receive hundreds, or even thousands, of bills each month. We have the experience and knowledge to take the hassle and guesswork out of processing your utility bills, as well as the potential for overpayment. **By outsourcing your bill processing to LPB, your organization can create significant cost savings, as well as easily track utility cost and consumption information.** Once we receive your bills, our *23-point* check system ensures that the amount you are charged is accurate through our bill verification process. When we find discrepancies, we resolve them on **your behalf** so that you only pay what you owe. Once we've verified the correct amounts, we make all of your billing data available to you 24/7 online, via our award-winning Utility Manager™ OnLine reporting tool.



Once your data is in your Utility Manager™ database, LPB can provide you with Bill Payment support as well. We can email you an Accounts Payable file for you to upload seamlessly into your accounting system. Then you can maintain control of actual payment without having to deal with the headaches of entering the data into your accounting system.

Alternatively, we can pay your bills for you either from an account established and maintained in your name (allowing you to enjoy maximum interest on your utility spend) or from an account maintained by LPB for the express purpose of paying our clients' bills. Our competitors don't give you both options. At LPB, with bill payment support, as well as data entry, the choice is yours.

## ENERGY PROCUREMENT

With your usage and cost data available to the LPB Energy Management Commodities Desk, we are in a terrific position to help you identify savings opportunities wherever competitive supply choices are available to you. LPB clients currently have over 8 billion kwh of electricity under contracts negotiated by LPB Energy Management. LPB's integrated solution has helped hundreds of clients maximize cost-savings opportunities in competitive electricity and natural gas markets. The members of our commodities desk have a collective 80 years of experience in trading and monitoring energy commodities. We offer our clients daily and weekly written forecasts, published on our website, so we can be held accountable for our market calls.

Since each client has different needs, we work to develop the market strategy that works best for you, help you see it through, making any adjustments necessary in response to market changes.

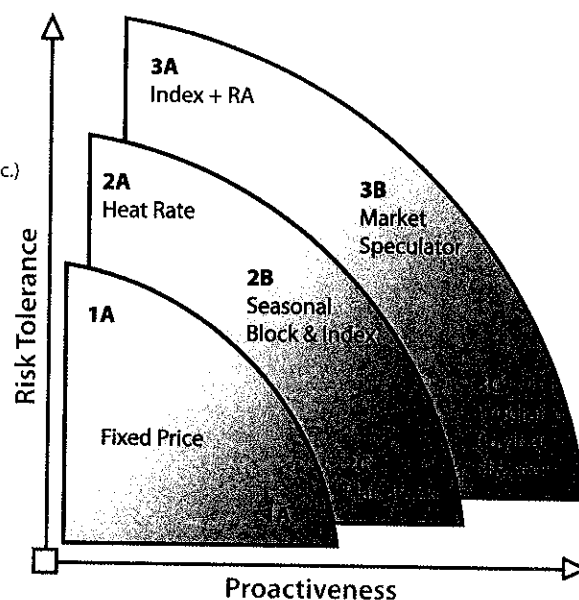
### Procurement Services:

#### Pre-Contract Services

- Load Analysis
- Individual Risk Analysis
- Process Selection (RFP, Reverse Auction, Sealed Bids etc.)
- Strategic Product Selection
- Solicitation & Supplier Evaluation
- Supply Contract Negotiation
- Market Timing Evaluation

#### Post-Contract Services

- Switch Verification
- Invoice Verification
- Meter Add/Deletes
- Market Watch
- Lock / Renewal / Extension



**By employing LPB's Market Analysis Team and utilizing their Superior Hedging Strategies, three of our key procurement clients have saved a combined \$625,000 for the first quarter of 2008.**

## UTILITY BILL AUDITS

Your fully populated Utility Manager™ database also provides the foundation for our expert Bill Audit team to find refunds, credits and future savings. **Overcharges inflate utility costs and can result from errors in any aspect of the billing process, including metering problems, calculation mistakes, improper application of rates or contract prices.** LPB Energy Management's audit team has been auditing utility bills using Utility Manager™ software since 1990, providing clients with cost savings as well as additional long-term benefits for budgeting, forecasting, and energy management. During a utilities audit, we discover, analyze and correct errors in utility bills. We secure savings in electricity, natural gas, water, and sewer utility services. If we find errors, we negotiate with the utility on your behalf, leaving your employees free to do higher value work for your organization. Optimizing tariffs and rates will also ensure that future invoices are not higher than they should be.

### Sample Audit Savings from Actual LPB Clients:

Your Area Community College District\*  
Single campus (site) with 34 accounts

Category	Amount
Refunds	\$107,579.41
Annual Savings	\$50,000.00
Total Savings:	\$157,597.41

LPB Assisted Living Facilities\*  
30 sites with 115 accounts

Category	Amount
Refunds	\$42,381.79
Annual Savings	\$33,575.69
Total Savings:	\$75,957.48

\*Names changed to protect client confidentiality

## ENERGY STAR



In 1996, the EPA and the US Department of Energy began ENERGY STAR, a voluntary labeling program to help consumers and organizations save money and protect the environment by reducing energy usage. Companies and organizations quickly discovered that not only could becoming an ENERGY STAR Partner help them reduce energy costs, but it was also a great promotional tool.

LPB encourages our clients to become ENERGY STAR Partners for both of these reasons. **We'll handle the entire process, from submitting the required paperwork to tracking your usage and generating optimal promotional value from your partnership.**

### Becoming more energy efficient is great for business

65% of Americans recognize the ENERGY STAR label. That means that most people think energy conservation and environmental issues are important. Your ENERGY STAR Partnership is a visual assurance of your commitment to the environment. Additionally, connecting with the people you serve on a personal level gives you a distinct competitive advantage.

Becoming an ENERGY STAR Partner requires you to track and manage your energy usage patterns and helps you identify opportunities to make changes that can reduce your energy costs. In fact, with the help of ENERGY STAR, in 2006 alone, the US economy saved \$14 billion in energy costs.

### LPB helps you maximize the value of your ENERGY STAR Partnership

In 2006, LPB Energy received the ENERGY STAR "Partner of the Year Award", and again won the "Continuing Excellence Award" for 2007. We know what it takes to get the most from your partnership. Once your partnership becomes effective, we'll help you meet your ENERGY STAR tracking and benchmarking requirements using our award-winning Utility Manager™ software.

**LPB is one of a select few service providers that offer automated Energy Star benchmarking. Utility Manager™ interfaces seamlessly with Portfolio Manager, the Energy Star benchmarking program.**

Even if you are not in a benchmarked industry, or if you are not interested in making capital investments in efficiency improvements, you can still become an Energy Star Partner and use the logo to demonstrate to your customers, staff or constituency, your commitment to energy efficiency. Having your data in a Utility Manager™ database is the first step. LPB will take care of the rest and help you get the most out of the Energy Star program to increase your revenues.

*Call your LPB Business Development Manager to find out how to increase your visibility by becoming more energy efficient as an ENERGY STAR Partner.*

## ENERGY EFFICIENCY

**Improving energy efficiency is on everyone's minds these days.** How can you ensure that your investment in energy efficiency yields the desired return? By relying on LPB Energy Management's team of experts, you can breathe easier.

LPB functions as your advocate in helping you identify projects that will make the most sense for you. We are a truly objective voice that had no vested interest in whether you invest in a given project or not. Like consulting a doctor for a second opinion before undergoing major surgery, it just makes sense to seek the advice of someone who is not selling what you're buying, but rather offering truly objective advice.

### Here are some of the ways LPB can help you:

- Audit your facility to identify behavior modification and/or projects to improve efficiency
- Support your RFP process to select the best contractor
- Help you negotiate your contract(s) with energy services companies
- Monitor the performance of your contractors
- Verify the effectiveness of your behavior modification programs and/or efficiency projects

*Give your LPB Business Development Manager a call today and start understanding and acting on your energy efficiency options.*





## DEMAND RESPONSE

Another savings opportunity that your Utility Manager™ data can facilitate is participation in Demand Response programs. **In response to shortages of delivery capacity, utilities are increasingly seeking customers able and willing to voluntarily reduce their usage during peak usage periods.** If some customers can reduce their usage upon request, the utilities will be better able to meet peak demand.

If you are considering investing in back-up generation or if you can reduce or temporarily halt your operations, you could be eligible to receive compensation from your utility.

LPB Energy Management can help you determine if you are a good candidate by reviewing your usage profile using Utility Manager™ software. If you are a good candidate, LPB can use your Utility Manager™ data to prove your eligibility to suppliers and help you enrol in the best program for you. (Many utilities offer different demand response options.)

Without your data and Utility Manager's reporting capability, participating in these kinds of programs can be risky and difficult.

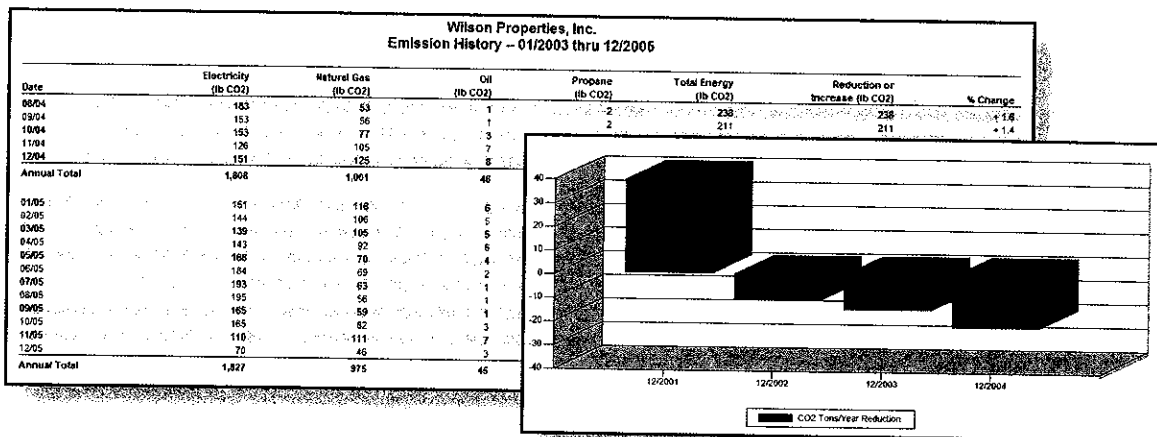
## CARBON EMISSIONS REPORTING

During the past few years, energy users have become increasingly aware of the link between fuel consumption and the creation of CO<sup>2</sup>, a greenhouse gas that causes global warming. As a result, many businesses and government agencies are actively participating in programs that are aimed at reducing both energy use and emissions.

**Utility Manager™** now provides a set of reports that will support your efforts to understand and manage your organization's greenhouse gas emissions.

These Reports:

- Quantify the CO<sup>2</sup> emissions that result from your consumption of energy
- Identify opportunities for reduction
- Measure reduction over time



### How does Utility Manager™ calculate your emissions?

Utility Manager™ employs a set of factors developed by the Environmental Protection Agency (EPA) and published in the eGRID database in order to determine your carbon emissions. We use these factors, combined with usage data in your Utility Manager™ database to generate your Carbon Emissions Reports.

### Reports

Utility Manager™ now provides seven reports and graphs that display information about CO<sup>2</sup> emission totals as well as reduction in CO<sup>2</sup> emissions.

- CO<sup>2</sup> Emissions History Report
- CO<sup>2</sup> Emissions History Graph
- CO<sup>2</sup> Reductions Report
- CO<sup>2</sup> Reductions Graph
- CO<sup>2</sup> Emissions Site Comparison Report
- CO<sup>2</sup> Reduction Equivalents Graph
- Emission Factors

*Call your LPB Business Development Manager today to start understanding and reducing your carbon emissions!*

# **RECYCLABLE PAPER**

RESOLUTION NO. \_\_\_\_\_

FULL BOARD MEETING DATE: \_\_\_\_\_

AGENDA ITEM: \_\_\_\_\_

**MACOMB COUNTY, MICHIGAN**

**RESOLUTION TO** authorization to proceed with the installation of the Ozone Laundry Generation System at the Jail Annex

**INTRODUCED BY:** Phil DiMaria, Chair, Ad Hoc Committee on Countywide Energy Conservation

**COMMITTEE/MEETING DATE**  
Ad Hoc 11-17-07  
\_\_\_\_\_  
\_\_\_\_\_



# FACILITIES & OPERATIONS DEPARTMENT

10 N. Main St., 13th Floor  
Mount Clemens, Michigan 48043  
586-469-5244 FAX 586-469-7770

Lynn M. Arnott-Bryks  
Director

Diane G. Connell  
Operations Supervisor

Larry K. Oakes  
Mechanical Systems Supervisor

TO: Commissioner Phillip A. DiMaria, Chairman  
Energy Conservation Committee

SUBJECT: Ozone Laundry System

DATE: October 1, 2008

As you are aware, the Energy Conservation Committee authorized proceeding with the installation and metering of the Ozone Laundry System at the Jail. Based upon the annual savings of \$24,644.00 and return on investment nine-ten months (see Attachment A) it made fiscal sense to continue with the Ozone Generation System.

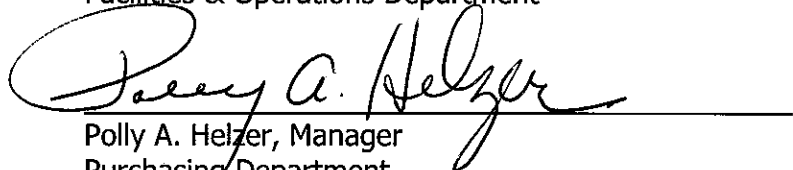
The Jail also has a smaller laundry operation located in the Jail Annex. Attached is the projected savings and return on investment. Based upon the results, we are requesting to proceed with the installation of the Ozone System in the Jail Annex (Attachment B).

The findings of the Ozone System will be forwarded to Martha T. Berry Administration for their review and potential for implementation.

Should you have any further questions or require additional information, please contact the undersigned.

Respectfully,

  
Lynn M. Arnott-Bryks, Director  
Facilities & Operations Department

  
Polly A. Helzer, Manager  
Purchasing Department

Attachments

LMAB:jsd

## MACOMB COUNTY BOARD OF COMMISSIONERS

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ATTACHMENT A

September 8, 2008

Tim Corcoran  
Macomb County Purchasing  
10 N Main -- 13<sup>th</sup> Floor  
Mt. Clemens, MI 48043

Hello Tim,

The one month test utilizing ozone for laundering at Macomb County Jail has been completed. The results of that test were very positive, as expected. Attached please find the following reports:

- 1) A Laundry Hot and Total Water Use Study Utilizing Ozone, which has the initial water meter readings to start the test with ozone, the final readings and the hot and total gallons of water consumed during the 28 day period.
- 2) A Total Cost of Water Study Utilizing Ozone, which breaks down the total cost of water and sewer charges laundering with ozone.
- 3) A Cost to Heat Water Study Utilizing Ozone, breaking down the cost of natural gas to heat the water utilizing ozone for laundering.
- 4) And finally, an Ozone Laundry Savings report, which compares the cost of laundering prior to the installation of ozone with the costs utilizing ozone in the laundry. The combined hot and total water savings is calculated to be \$24,644.80 annually.

Because of the precise measurement of the hot and total water for both tests and applying them to the formula for calculating the cost to heat water, you can expect to achieve these savings on an annual basis. The return on investment for Macomb County will be 9-10 months. Obviously, as the cost for natural gas and water and sewer charges rise, the savings will rise proportionately. (Projections for natural gas cost increases range from 25% to 52% over the next year.)

Feed back from the laundry trustees has also been positive, with laundry being noticeably whiter and brighter. Because of the large reduction of hot water in the laundering process, which deteriorates linen, and the natural softening characteristics of ozone, most facilities experience a 20% reduction of linen replacement costs. Macomb County Jail should enjoy similar savings in this area.

We were able to reduce the hot water needs by about 85% and the total water use by about 40%. The quality of linens has increased, and you are achieving the highest level of disinfection possible in the laundry (99.999...% bacteria kill, including MRSA, HIV, hepatitis, C.diff, etc.).

Everything that Macomb County wanted to achieve using ozone for laundering at the jail has been accomplished. The need for a designated boiler for the laundry has also been eliminated, saving additional funds. I'm sure you will agree that the addition of an AquaFusion Ozone Laundry System to the jail's main laundry has been successful. The use of ozone in the annex laundry and at Martha T. Berry should also provide large savings with very positive results. We will be happy to start testing at either or both places as soon as possible.

Please look over the attached information. If all looks good to you, please issue a PO for the unit in the agreed amount of \$19,935.00. I look forward to talking to you soon.

Respectfully,  
Universal Laundry Machinery

Mike DeTavernier

**LAUNDRY HOT AND TOTAL WATER USE STUDY  
UTILIZING OZONE**

**MACOMB COUNTY JAIL**

On August 7, 2008 an AquaFusion Ozone Laundry System was installed at Macomb County Jail for a 1 month test comparing hot and total water consumption while utilizing ozone with conventional hot water washing. Initial water meter readings were noted on that day, with final readings taken on September 4, 2008. Following are the initial readings of each meter for each washer for the ozone test and the final readings for each meter as well as total gallons used.

<u>Washer</u>		<u>Initial Reading</u>	<u>Final Reading</u>	<u>Gallons Used</u>
Left #1	Hot	124573	133301	8,728
	Hot	30264	37054	6,790
	Cold	56471	70604	14,133
	Cold	2971	13557	10,586
Center #2	Hot	181095	184676	3,581
	Hot	110464	110845	381
	Cold	68047	80763	12,716
	Cold	1249	4931	3,682
Right #3	Hot	52958	54922	1,964
	Hot	46566	47957	1,391
	Cold	42607	53168	10,561
	Cold	29332	36727	7,395

Total water use for 28 days of laundering was 81,908 gallons

Total hot water use for 28 days of laundering was 22,835 gallons

Average daily total water used: 81,908 gallons divided by 28 = **2,925 gallons per day**

Average daily hot water used: 22,835 gallons divided by 28 = **816 gallons per day**



**TOTAL COST OF WATER STUDY  
UTILIZING OZONE**

**MACOMB COUNTY JAIL**

Based on information received from Macomb County Jail and water meter readings (see Laundry Hot and Total Water Use Study Utilizing Ozone):

ASSUMING: Cost of water for laundering is \$3.30 per 1000 gallons and cost of sewer is \$4.46 per 1000 gallons.

From the Laundry Water Use Study, daily water used for laundering is 2,925 gallons.

2,925 gallons divided by 1000 = 2.93

Daily cost of water:  $2.93 \times \$3.30 = \$9.67$

Daily cost of sewer:  $2.93 \times \$4.46 = \$13.07$

Daily combined cost of water for laundering is \$22.74

$\$22.74 \times 365 \text{ days} = \$8,300.10 \text{ per year}$

**Annual cost of total water for laundering with ozone at Macomb County Jail is  
\$8,300.10**

**COST TO HEAT WATER STUDY  
UTILIZING OZONE**

**MACOMB COUNTY JAIL**

Based on information received from Macomb County Jail:

ASSUMING: Water is heated to 150 degrees F, with a temperature rise of 110 degrees.  
Cost of natural gas to heat water for laundering is \$1.34 per therm.

From the Laundry Water Use Study, daily hot water used for laundering is 816 gallons.  
The formula to calculate BTUs needed to heat water is as follows:

Gallons x 8.33 (weight of 1 gallon of water) x temperature rise = BTUs, therefore:

816 gallons x 8.33 x 110 (temperature rise) = 747,701 BTUs

Efficiency of water heater must be considered, therefore:

747,701 divided by .75 = 996,934 actual BTUs consumed daily

100,000 BTUs = 1 therm

996,934 divided by 100,000 = 9.97 therms per day

9.97 x \$1.34 (cost per therm) = \$13.36 per day

\$13.36 x 365 days = \$4,876.40 per year

**Annual cost to heat water for laundering utilizing ozone at Macomb County Jail is  
\$4,876.40**

## **OZONE LAUNDRY SAVINGS REPORT**

### **MACOMB COUNTY JAIL**

Annual cost of total water (pre-ozone)	\$13,742.25
--	-------------

Annual cost of total water (w/ozone)	\$ 8,300.10
--------------------------------------	-------------

<b>Annual savings of total water utilizing ozone</b>	<b>\$ 5,442.15</b>
--	--------------------

Annual cost to heat water (pre-ozone)	\$24,079.05
---------------------------------------	-------------

Annual cost to heat water (w/ozone)	\$ 4,876.40
-------------------------------------	-------------

<b>Annual savings of cost to heat water with ozone</b>	<b>\$19,202.65</b>
--	--------------------

**Total combined annual savings of hot and total water costs utilizing ozone for laundering is \$24,644.80**

**TOTAL COST OF WATER STUDY**

**MCJ ANNEX**

Based on water cost of \$3.30 per 1,000 gallon unit and sewer cost of \$4.46 per 1,000 gallon unit, total cost of water \$7.76 per 1,000 gallons

ASSUMING: 3,800 pounds laundered per week (see Cost to Heat Water Study), 2 ½ gallons water per pound.

$3,800 \text{ lbs. per week} \times 2 \frac{1}{2} \text{ gallons} = 9,500 \text{ gallons per week}$

$9,500 \text{ gallons} \times 52 \text{ weeks} = 494,000 \text{ gallons annually}$

$494,000 \text{ divided by } 1,000 = 494 \text{ units}$

$494 \text{ units} \times \$7.76 = \$3,833.44$

**MCJ Annex's total annual cost of water for laundering is \$3,833.44**

## **COST TO HEAT WATER STUDY**

### **MCJ ANNEX**

ASSUMING: Hot water wash cycles are similar to the main laundry. Water for laundering is heated to 180 degrees F, with a temperature rise of 130 degrees. Of the total water used for laundering, 83% is hot. Typical wash cycles call for 2 ½ gallons of water per pound laundered, or 2.08 gallons of hot water per pound. 190 inmates generate 20 pounds of laundry per week. Cost of natural gas to heat water is \$1.34 per therm.

$190 \times 20 \text{ lbs.} = 3,800 \text{ lbs./week}$

$3,800 \times 2.08 \text{ gallons} \times 8.33 \text{ (weight of 1 gallon of water)} \times 130 \text{ (temperature rise)} = 8,559,242 \text{ BTUs}$

$8,559,242 \text{ divided by } .75 \text{ (efficiency of water heater)} = 11,412,323 \text{ actual BTUs}$

$100,000 \text{ BTUs} = 1 \text{ therm}$

$11,412,323 \text{ divided by } 100,000 = 114.13 \text{ therm/week}$

$\$1.34 \text{ (cost per therm)} \times 114.13 = \$152.94 \text{ per week}$

$\$152.94 \times 52 \text{ weeks} = \$7,952.88$

**MCJ Annex is spending \$7,952.88 annually to heat water for laundering.**

## OZONE SAVINGS ANALYSIS

### MCJ ANNEX

ASSUMING: Savings created by utilizing ozone in the Annex will be comparable to those achieved in the main laundry.

Based on an Aquafusion Ozone Laundry System saving 85% of the cost of heating water for laundering and 40% savings in the cost of total water for laundering.

$\$7,952.88$  (present annual cost to heat water)  $\times 85\% = \$6,759.95$  annual savings

$\$3,833.44$  (present annual cost of water)  $\times 40\% = \$1,533.38$  annual savings

Total annual savings =  $\$8,293.33$

**MCJ Annex will realize annual hot and total water cost savings of  $\$8,293.33$**

The appropriate installed Aquafusion Ozone Laundry System would be  $\$16,995.00$ , giving MCJ Annex **a return on investment of approximately 2 years.**

# **RECYCLABLE PAPER**

RESOLUTION NO. \_\_\_\_\_

FULL BOARD MEETING DATE: \_\_\_\_\_

AGENDA ITEM: \_\_\_\_\_

**MACOMB COUNTY, MICHIGAN**

RESOLUTION TO: Review and File - Resolution to Establish Regional Partnership for Sustainability and  
Rebuild Michigan.

INTRODUCED BY: Commissioner Phillip A. DiMaria, Chair  
Energy Conservation Committee

**COMMITTEE/MEETING DATE**

Meeting Date: 11/17/08  
\_\_\_\_\_  
\_\_\_\_\_





# FACILITIES & OPERATIONS DEPARTMENT

10 N. Main St., 13th Floor  
Mount Clemens, Michigan 48043  
586-469-5244 FAX 586-469-7770

Lynn M. Arnott-Bryks  
Director

Diane G. Connell  
Operations Supervisor

Larry K. Oakes  
Mechanical Systems Supervisor

TO: Commissioner Phillip DiMaria, Chairman  
Energy Conservation Committee

SUBJECT: "Going Green"

DATE: October 6, 2008

On September 12, 2008, the Tri-County Summit was held. One of this year's topics was "Going Green" to promote regional strategies in promoting energy efficiency.

The Legislative and Administrative Services Committee recommends to the Full Board to adopt Resolution to Establish a Regional Partnership for Sustainability (see Attachment A). Attached is a copy for your convenience.

The Resolution refers to "Rebuild Michigan". Attached herewith is information regarding Rebuild Michigan (See Attachment B).

Should you have any further questions or require additional information, please contact the undersigned.

Respectfully,



Lynn M. Arnott-Bryks, Director  
Facilities & Operations Department

Attachments

LMAB:jsd

## MACOMB COUNTY BOARD OF COMMISSIONERS

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# **Regional Partnership for Sustainability**

A Proposed Cooperative Effort of the  
Counties of Wayne, Oakland and Macomb  
and the City of Detroit

## **CONTENTS**

- *Proposal for a Regional Partnership for Sustainability*
- *Regional Partnership for Sustainability: Focus on Energy*
- *Resolution to Establish a Regional Partnership for Sustainability*
- *Resolution to Make Energy Efficiency the Focus of the Partnership*

## **Proposal for a Regional Partnership for Sustainability**

### *Vision:*

Environmental and economic challenges are regional in nature and will be most effectively addressed by cooperation across jurisdictional boundaries. Issues such as energy efficiency, transportation, waste management, air and water quality, reducing heat island effect, reducing carbon emissions, and restoring economic and social vitality spread across the region. It is only through working together as a tri-county region that we will be able to achieve sustainability and restore prosperity. A sustainable future is one built on meeting today's needs without compromising the ability of future generations to meet their needs and must encompass the triple bottom line: environmental integrity, economic prosperity, and social equity.

### *Mode:*

In recognition of our shared concerns and of the regional collaboration that will be required to tackle them, the goal of the Going Green Subcommittee of the Tri-County Summit 2008 is to produce a plan for the creation of a Regional Partnership for Sustainability. Such a partnership will be a framework for dealing with the wide range of environmental and economic challenges the southeast Michigan region faces today. The Partnership will be a substantive product of the Tri-County Summit; it will be an entity through which local governments, business, and institutions of the region can reach consensus and work together to craft agreements resulting in solutions for a sustainable future.

Partners will identify a unified vision for regional sustainability that will be a guiding framework for sustainable practices. In order to implement the vision, a regional sustainability council should be formed and each partner will adopt a sustainability plan that promotes the triple bottom line by establishing baseline data, identifying indicators, and determining benchmarks for improvement.

### *Impacts:*

- Increased opportunities for collaboration to strengthen impacts, create opportunities, and lower costs for each partner
- Measurable positive environmental and economic impact for each partner
- Increased public understanding and engagement in the work of our partners
- Increased business and job opportunities
- Increased economic vitality for the overall region
- Improved quality of life for the overall community

### *Benefits:*

- Enables the partners to identify values and priorities
- Builds relationships and regional cooperation through collaboration
- Allows partners to define what is important and make decisions based on those identified values
- Green jobs and restored economic and social vitality throughout southeastern Michigan

## **Regional Partnership for Sustainability: Focus on Energy**

There were several environmental concerns raised at the first Going Green Subcommittee meeting, including energy efficiency, green buildings, water quality monitoring, and stormwater management. The proposed Regional Partnership for Sustainability can be the vehicle to establish a unified regional vision and guiding framework for sustainable practices around these and other issues.

It is suggested that energy efficiency be the initial focus of the Partnership for the following reasons:

- Measurable results can be demonstrated within a relatively short time frame
- The City of Detroit and Macomb, Oakland, and Wayne Counties (and the municipalities within them) all have an opportunity to participate
- Participation can extend to employee practices (and beyond)
- Training in best practices, technical assistance, and energy audits can be made available through working with WARM Training, the Southeast Michigan Regional Energy Office and ReBuild Michigan initiatives

The remaining areas of interest can still be addressed if the tri-county participants choose to continue or expand the scope of the Partnership.

**2008 TRI-COUNTY SUMMIT  
GOING GREEN COMMITTEE  
RESOLUTION TO ESTABLISH A REGIONAL PARTNERSHIP  
FOR SUSTAINABILITY**

**WHEREAS**, environmental and economic challenges are regional in nature and will be most effectively addressed by cooperation across jurisdictional boundaries; and

**WHEREAS**, the Detroit City Council and the County Commissions of Wayne, Oakland, and Macomb Counties convened at the 2008 Tri-County Summit to collaborate in finding regional solutions to environmental and economic issues; and

**WHEREAS**, a sustainable future is one built on meeting today's needs without compromising the ability of future generations to meet their needs, and must encompass the triple bottom line of environmental integrity, economic prosperity and social equity; and

**WHEREAS**, this objective can best be achieved through a joint partnership between the Detroit City Council and the County Commissions of Wayne, Oakland, and Macomb Counties; and

**WHEREAS**, such a partnership, to be called the Regional Partnership for Sustainability, will establish a framework for dealing with a wide range of environmental and economic challenges faced by the southeast region of Michigan; and

**WHEREAS**, the Partnership will be a substantive product of the 2008 Tri-County Summit, as well as an entity through which government, business and institutions within the region can work together to craft desired goals resulting in solutions for a sustainable future; and

**WHEREAS**, we are confident that such a commitment from the Tri-County communities will prove to be a model for regional growth and sustainability;

**THEREFORE BE IT RESOLVED**, that the Detroit City Council and the Wayne, Oakland, and Macomb County Commissions hereby recognize the significant benefit of regional cooperation and join together to establish the Regional Partnership for Sustainability; and

**BE IT FURTHER RESOLVED**, that a steering committee shall be formed with two bi-partisan (as appropriate) voting representatives each from the Detroit City Council and the Commissions of Wayne, Oakland, and Macomb Counties to provide direction and oversight; the steering committee will also include non-voting members representing city and county departments and subject experts; and

**BE IT FURTHER RESOLVED**, that the Detroit City Council and the Commissions of Wayne, Oakland, and Macomb Counties shall take a vote regarding the establishment of

the Partnership by November 15, 2008; and providing the Partnership is established, convene the first meeting of the steering committee by January 16, 2009; and

**BE IT FINALLY RESOLVED**, that the Partnership will have a three-year duration with the option to continue its work towards a sustainable region beyond three years as deemed fit and necessary.

**2008 TRI-COUNTY SUMMIT  
GOING GREEN COMMITTEE  
RESOLUTION TO MAKE ENERGY EFFICIENCY  
THE FOCUS OF THE REGIONAL PARTNERSHIP  
FOR SUSTAINABILITY**

**WHEREAS**, the Detroit City Council and the County Commissions of Wayne, Oakland and Macomb Counties have established the Regional Partnership for Sustainability; and

**WHEREAS**, Michigan's per capita energy use continues to steadily increase even as energy costs increase; and

**WHEREAS**, cities and counties can increase energy efficiency through green building practices and other energy-efficient actions and policies that can demonstrate measurable results; and

**WHEREAS**, energy efficiency and diversification can create opportunities for economic revival by providing job and business opportunities within the emerging green economy; and

**WHEREAS**, there are models of government-led success in other cities, states, and regions;

**THEREFORE BE IT RESOLVED**, that the initial focus of the Regional Partnership for Sustainability be on Energy Efficiency; and

**BE IT FURTHER RESOLVED**, that the Partnership will work with WARM Training, and the Southeast Michigan Regional Energy Office and ReBuild Michigan initiatives for technical assistance, training in best practices and energy audits.





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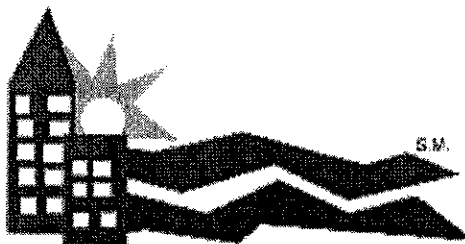
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## Rebuild Michigan



The Rebuild Michigan

Program fosters

partnerships that promote increased energy efficiency within a community.

Partners may include local governments, schools, universities, businesses, non-profit organizations and

public housing authorities. With assistance from state government and other partners each community can determine energy saving opportunities and goals and work to implement an energy action plan.

## Program Benefits

Rebuild Michigan Partners gain access to resources and technical assistance to develop a comprehensive action plan. This plan will map out the facility's or community's energy future and how it can be achieved. Once the plan is put into action partners realize many benefits such as:

## Cost Savings

By implementing energy efficiency projects, energy costs will be reduced and saved dollars can be used elsewhere in the organization or the community

## Improved Building Quality

Energy efficient buildings are easier to maintain, more comfortable for occupants, and have better indoor air quality.

## Environmental Protection

By reducing energy demand, facilities and communities can reduce emissions from energy generation and improve the health and welfare of its occupants.

## Getting Started

The Rebuild Michigan Program is designed to assist public K-12 schools, colleges, universities, local governments and public housing authorities with improving the energy efficiency of their buildings. This program offers technical assistance and attractive financing information for cost effective projects. Eligible public institutions can install the recommended improvements with little or no upfront capital.

[Information on Becoming a Program Participant](#)

[Community Partnerships](#)

To become a community partnership the organization should form a coalition within the community. The coalition (consisting of community members, local businesses, schools, etc.) then forms a partnership with the Michigan Energy Office.

If you are interested in forming a Rebuild Michigan partnership and/or receiving application information, contact Tom Krupiarz at (517) 241-6184 or by email at [krupiarzt@michigan.gov](mailto:krupiarzt@michigan.gov).

### **Michigan Community Partnerships**

#### **Publications**

- [September 2007, Rebuild MI Partner News](#) **PDF**
- [June 2007, Rebuild MI Partner News](#) **PDF**
- [March 2007, Rebuild MI Partner News](#) **PDF**
- [December 2006, Rebuild MI Partner News](#) **PDF**
- [EnergySmart Schools Financial Incentive 2005-2006](#) **PDF**
- [Building Commissioning Guide](#) **PDF**
- [Energy Smart Guide to Campus Cost Savings](#) **PDF**
- [Financing Handbook](#) **PDF**
- [How to collect Building Data](#) **PDF**

#### **Related Links**

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#### **Services**

- [Michigan EnergySmart Schools](#)
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**Rebuild Michigan Energy Services***2007 Annual Report*

The Rebuild Michigan Program is designed to assist public K-12 schools, colleges, universities, local governments and public housing authorities with improving the energy efficiency of their buildings. This program offers technical assistance and attractive financing information for cost effective projects. Eligible public institutions can install the recommended improvements with little or no upfront capital.

*Program Participants:*
[2008](#) | [2007](#) | [2006](#) | [2005](#) | [2004](#) | [2003](#) | [2002](#) | [2001](#) | [2000](#) | [1999](#) | [1998](#)
**Program Highlights**

- Utility bill analysis and energy consumption profile for each building.
- Free walk-through energy analysis and Introductory Energy Evaluation (IEE) report.
- [Sample IEE Report for a school district](#)
- [Sample IEE Report for a local government](#)
- [EnergyStar benchmarking for eligible buildings](#)
- Listing of energy consultants to conduct technical energy analyses
- Quality review of each completed technical energy analysis report
- Low cost project financing through the [Michigan Municipal Bond Authority](#) to purchase energy efficiency improvements
- A repayment schedule structured around the project's energy savings rate
- Project monitoring and troubleshooting

**Program Partners Selected**

The Energy Office (EO) is partnering with several public member associations and participating energy consultants to promote building and k-12 curricular energy services.

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# Rebuild MI Advantages

Rebuild MI helps public facility managers:

- ⇒ Reduce operating costs
- ⇒ Increase occupant comfort & productivity
- ⇒ Pay for projects through energy cost savings
- ⇒ Raise public awareness & support for energy efficiency
- ⇒ Increase building system equipment life
- ⇒ Increase funding for core activities
- ⇒ Limit harmful emissions
- ⇒ Showcase leadership & environmental stewardship

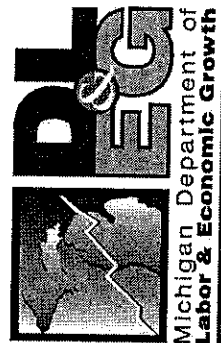
More than 490 schools, colleges and municipalities have benefited from Rebuild MI. Potential for energy efficiency investment now exceeds \$45 million with projected annual savings over \$14 million.

Rev. 1/2008

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Michigan

## Energy Assistance For Public Buildings



[www.michigan.gov/eormes](http://www.michigan.gov/eormes)

517.241.6228

MI Department of  
Labor & Economic Growth  
Energy Office  
P.O. Box 30221  
611 W. Ottawa, 4th Floor  
Lansing, MI 48909

# Services Available To Rebuild MI Participants

The Rebuild MI Program assists public K-12 schools, local governments, public colleges/universities, public housing authorities and small commercial building owners with increasing operational energy efficiency by:

- ◆ Providing technical assistance
- ◆ Offering attractive financing for cost effective projects
- ◆ Offering educational tools & opportunities
- ◆ Recognizing achievement
- ◆ Disseminating information on technologies

After you enroll, a Rebuild MI technical analyst will complete a free *Introductory Energy Evaluation (IEE)* of your facilities. The IEE report summarizes specific opportunities for reducing energy consumption and includes:

- ◆ A utility bill analysis
- ◆ A list of recommendations for operational and maintenance improvements
- ◆ A list of recommended energy efficiency upgrades plus financing information
- ◆ Project planning assistance

The *Technical Energy Analysis (TEA)* service includes:

- ◆ A list of TEA consultants that can provide a professional, in-depth evaluation of current facility energy usage
- ◆ TEA Guidelines
- ◆ A quality, independent review of your TEA report.

Rebuild MI also provides:

- ◆ Technical workshops and webinars.
- ◆ Newsletters & case studies
- ◆ Information and tools for improving the operational energy efficiency of your buildings.
- ◆ ENERGY STAR benchmarking
- ◆ Information on energy efficiency technologies
- ◆ Community Partnerships

Rebuild MI is offered statewide in cooperation with the U.S. Department of Energy, energy service providers, community partners and affiliated membership associations.

Please send me additional  
Rebuild MI information.

Name \_\_\_\_\_

Title \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

Email Address \_\_\_\_\_

Best Date & Time To Contact \_\_\_\_\_

Mail this tear-off to the address below or request assistance online at [www.michigan.gov/eormes](http://www.michigan.gov/eormes).

MI Department of  
Labor & Economic Growth  
Energy Office  
P.O. Box 30221  
611 W. Ottawa, 4th Floor  
Lansing, MI 48909

Phone: 517.241.6228  
Fax: 517.241.6229



## **Rebuild Michigan ENROLLMENT AGREEMENT**

This agreement between the Michigan Department of Labor & Economic Growth, Energy Office (EO) and the \_\_\_\_\_ outlines each organization's responsibilities for participating in the Rebuild Michigan program. Rebuild Michigan fosters partnerships that promote increased energy efficiency and renewable energy within a community. Rebuild Michigan provides services to public schools, community colleges, universities, public housing commissions and local governments to encourage energy efficiency improvements in their facilities. Assistance includes an assessment of energy savings potential for each building and recommendations and consultation regarding next steps (including an appropriate level of engineering services for Technical Energy Analyses (TEA)/project). A consultants' directory, project financing information and project troubleshooting are also offered.

**The Enrollee agrees to:**

- Designate an organization representative to serve as the principal contact with EO.
- Provide specific information for each participating building (see page 2).
- Present the Introductory Energy Evaluation report (prepared by EO) to the appropriate governing body, committee or individual responsible for approving an energy efficiency project.

**If energy efficiency potential is identified the Enrollee agrees to:**

- Participate in a planning session with Energy Office staff to discuss/assess enrollee interest in undertaking an energy efficiency project and to determine what EO support services will be needed.

**If Enrollee decides to pursue a TEA or performance contract, the Enrollee agrees to:**

- Contract with TEA analyst or Energy Service Co. (ESCO) to complete a TEA for each participating building. (Guidelines are available from the EO for quality assurance.)
- Direct their selected TEA analyst or ESCo to forward a draft copy of the TEA report to EO for review and approval, prior to organization's acceptance.
- Present TEA/performance contract recommendations to the appropriate governing body, committee or individual responsible for authorizing the recommended energy efficiency project(s).

**When authorized to implement the project, the Enrollee agrees to:**

- Provide a description & cost of the installed energy efficiency measures and copies of current utility bills for participating buildings to the EO as reasonably requested.

**The Energy Office agrees to:**

- Analyze the previous 12-months of energy usage for each participating building (up to 10 buildings or a maximum of 750,000 ft<sup>2</sup>), conduct a walk-through of each building and provide the Enrollee with a written report on their relative energy efficiency and areas for potential savings.
- Maintain a directory of consultant firms that conduct TEAs and participate in the Rebuild Michigan Program..
- Review all Technical Energy Analyses for quality, accuracy and completeness.
- Assist enrollee in resolving technical issues that may arise during project installation.
- Assist enrollee in evaluating first year energy savings and other project benefits.

**Contact/Building Information**

Contact Person &amp; Title: \_\_\_\_\_

Ph. #: \_\_\_\_\_ Fax #: \_\_\_\_\_ E-mail: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: Michigan Zip Code: \_\_\_\_\_**Rebuild Michigan Project Buildings:**

	Building Name	Address	Sq. Ft.	Yr. Built
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

*\*Most recent 12 months of utility data (or copies of utility bills) is required for each building listed***Planning Questions: (attach additional sheet(s) if necessary)**

1. What are your goals for building performance and energy reduction?
2. How will building energy improvements fit in with other organization priorities?
3. What financing options and sources are you considering for building improvements?
4. What is your likely timeframe for developing and completing an energy efficiency project?

Enrollee:
Signature/Date
Title/Position

Energy Office, MI Department of Labor & Economic Growth:
Signature/Date
Title/Position